

WHAT IS CLAIMED IS:

1. A sliding element for seals mainly comprising 25 to 75 weight % carbonaceous impalpable powdery aggregate of non-graphitizing carbon and/or graphitizing carbon and 20 to 50 weight % synthetic resin as binder, wherein carbonaceous
5 carbon fibers without surface treatment are blended within the range of 5 to 25 weight % and inside carbon matrix, said carbon fibers are randomly scattered.
2. The sliding element for seals as in claim 1, wherein said carbon fibers are 5 to 30 μ m diameter and 50 to 300 μ m length, source materials thereof are polyacrylonitrile or pitch series, maximum temperature of heat treatment is
10 1500°C or less and Vickers hardness is 200 or more.
3. The sliding element for seals as in claim 1, wherein Vickers hardness of carbonaceous impalpable powdery aggregate of non-graphitizing carbon and/or graphitizing carbon is 80 or more.
4. The sliding element for seals as in claim 1, wherein synthetic resins as said
15 binder are phenolic resin, epoxy resin, furan resin, polyester resin, or naphthalene resin.
5. The sliding element for seals as in claim 2, wherein synthetic resins as said binder are phenolic resin, epoxy resin, furan resin, polyester resin, or naphthalene resin.
- 20 6. The sliding element for seals as in claim 3, wherein synthetic resins as said binder are phenolic resin, epoxy resin, furan resin, polyester resin, or naphthalene resin.
7. The sliding element for seals as in claim 2, wherein the sliding element for seals is used as mechanical seal for water pump, mechanical seal for compressor of

car air conditioner, mechanical seal for pump of industrial use or mechanical seal for pump of all purposes.

8. The sliding element for seals as in claim 3, wherein the sliding element for seals is used as mechanical seal for water pump, mechanical seal for compressor of
5 car air conditioner, mechanical seal for pump of industrial use or mechanical seal for pump of all purposes.

9. The sliding element for seals as in claim 4, wherein the sliding element for seals is used as mechanical seal for water pump, mechanical seal for compressor of car air conditioner, mechanical seal for pump of industrial use or mechanical seal
10 for pump of all purposes.

10. A seal assembly comprising a sliding element as in claim 1 and a mating sliding element comprised of a harder material than the sliding element of claim 1.

11. The seal assembly as in claim 10, wherein the mating sliding element
15 is comprised of silicon carbide.

12. A process of manufacturing sliding element for seals, comprising the steps of blending source material mainly comprising 25 to 75 weight % carbonaceous impalpable powdery aggregate of non-graphitizing carbon and/or graphitizing carbon and 20 to 50 weight % synthetic resin as binder with 5 to 25 weight %
20 carbonaceous carbon fibers without surface treatment and mixing, kneading and molding the blended material to a preform, then firing the preform at a predetermined temperature.

13. The process of manufacturing sliding element for seals as in claim 12, wherein said carbon fibers are 5 to 30 μ m diameter and 50 to 300 μ m length, source

materials are polyacrylonitrile or pitch series, maximum temperature of heat treatment is 1500°C or less and Vickers hardness is 200 or more.

14. The process of manufacturing sliding element for seals as in claim 12, wherein synthetic resins as said binder are phenolic resin, epoxy resin, furan resin,
5 polyester resin, or naphthalene resin and a firing temperature for said firing is 800 to 1500 °C .

15. The process of manufacturing sliding element for seals as in claim 13, wherein synthetic resins as said binder are phenolic resin, epoxy resin, furan resin, polyester resin, or naphthalene resin and a firing temperature for said firing is
10 800 to 1500 °C .